

IN THE CLAIMS

Please amend Claims 1, 2, 4-6, 9-11 and 13 as shown below.

Marked-up copies of these claims are attached hereto.

- 1. (Amended) An image forming apparatus, comprising:
- a rotationally driven photoreceptor;
 - a charging device to electrically charging the photoreceptor;
 - an exposing device to imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;
 - a developing device to develop the latent image with toner so that a toner image is formed on the photoreceptor;
 - a transfer device to transfer the developed image to a recording material; and
 - a cleaning unit which removes residual toner on said photoreceptor which has passed a transfer zone in which a toner image formed on said photoreceptor is transferred to a recording material in which
- said cleaning unit comprises a cleaning roller which is disposed so as to come into contact with a surface of said photoreceptor, a bias voltage applying means which applies a bias voltage to said cleaning roller, and a flat board-shaped cleaning blade comprised of an elastic body which is disposed so that a leading edge of said cleaning blade comes into

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Unit 4

contact with the surface of said photoreceptor downstream from said cleaning roller with respect to a movement direction of said photoreceptor, and said cleaning blade is supported rotatably around a predetermined rotationally driven center axis O parallel to a rotational axis of said photoreceptor so that said cleaning blade is rotationally driven from a standard state in which the leading edge comes into contact with the surface of said photoreceptor while its total shape is not deformed and subsequently, is subjected to a working state while its entire body is curved, and the position of said rotationally driven center axis O is set so that said cleaning blade, in the standard state, satisfies the Conditions (1) and (2):

Condition (1): in the cross-section perpendicular to the rotational axis of said photoreceptor, straight line T drawn between contact position P of the leading edge of said cleaning blade with said photoreceptor and said rotationally driven center axis O is positioned between tangential line N at said contact position P and said cleaning blade, and

Condition (2): in the cross-section perpendicular to the rotational axis of said photoreceptor, contact angle θ of said cleaning blade with respect to the tangential line of

said photoreceptor at said contact point P is from 0 to 30 degrees. --

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-- 2. (Amended) The image forming apparatus of claim 1 wherein said cleaning blade has a contact load from 5 to 50 g/cm. --

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-- 4. (Amended) An image forming apparatus, comprising:

- a rotationally driven photoreceptor;
- a charging device to electrically charging the photoreceptor;
- an exposing device to imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;
- a developing device to develop the latent image with toner so that a toner image is formed on the photoreceptor employing toner comprising a lubricant as an external agent;
- a transfer device to transfer the developed image to a recording material in a transfer zone; and
- a cleaning unit which removes residual toner on said photoreceptor which has passed said transfer zone, wherein

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said cleaning unit comprises a cleaning roller which is disposed so as to come into contact with a surface of said photoreceptor, a bias voltage applying means which applies a bias voltage to said cleaning roller, and a flat board-shaped cleaning blade comprised of an elastic body which is disposed so that a leading edge of said cleaning blade comes into contact with the surface of said photoreceptor.

downstream from said cleaning roller with respect to a movement direction of said photoreceptor, and which comprises a control mechanism comprising a specified toner image forming function which forms a toner image for maintaining a blade effect to maintain a desired cleaning effect of said cleaning blade which reaches a cleaning zone employing said blade after passing said transfer zone. --

- 5. (Amended) The image forming apparatus of claim 4 wherein the control mechanism is capable of allowing said toner image for maintaining a blade effect to reach said cleaning zone, in which said cleaning blade is employed, by decreasing the cleaning effect obtained by said cleaning roller. --

-- 6.

(Amended) The image forming apparatus of claim 4, wherein the specified toner image forming function of said control mechanism controls the operation of said image forming unit so that said toner image for maintaining the blade effect is formed at every specified forming frequency. --

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(Amended) An image forming apparatus, comprising:

a rotationally driven photoreceptor having an axis

a charging device to electrically charging the photoreceptor which is arranged so as to face said photoreceptor while maintaining parallel to the axis;

an exposing device to imagewise exposing the photoreceptor so that a latent image is formed on the photoreceptor;

a developing device to develop the latent image with toner so that a toner image is formed on the photoreceptor employing toner comprising a lubricant as an external agent;

a transfer device which is arranged to face the photoreceptor while maintaining parallel to the axis and transfers a toner image on the photoreceptor onto a recording material in a transfer zone; and

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Q15 Unit
a cleaning unit which removes the toner on said photoreceptor which passes through said transfer zone, in which said cleaning unit comprises a cleaning blade which comes into contact with a surface of said photoreceptor, a cleaning roller which comes into contact with the surface of said photoreceptor upstream with respect to the movement direction of said photoreceptor and is arranged to maintain parallel to the axis of said photoreceptor, and a bias voltage applying means which applies a bias voltage to said cleaning roller, is characterized in that formulas (1) and (2) described below are satisfied;

$$\text{Formula (1)} \quad W2 < W1$$

$$\text{Formula (2)} \quad |W3 - W1| \leq 30 \text{ (in mm)}$$

wherein W1 is an effective cleaning area obtained by said cleaning roller in the axis direction of said photoreceptor, W2 is an effective transferring area of said transfer device and W3 is an effective charging area of said charging device. --